

CLAIMS

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1. An electric power generator set comprising:
 - an engine;
 - a generator driven by the engine;
 - an inverter having an ability of interconnecting the generator with an external electric power supply;
 - means for detecting information concerning electric power from the external electric power supply and electric power from the electric power generator set;
 - means for calculating electric power and energy from the external electric power supply, electric power and energy from the electric power generator set, and electric power and energy to load; and
 - means for registering each of the calculated electric powers and energies.
2. A electric power generator set as set forth in claim 1, further comprising:
 - image-displaying means for displaying each of the electric energies diagrammatically.
3. A electric power generator set as set forth in claim 2, further comprising:
 - means for calculating fuel consumption of the engine; and
 - image-displaying means for displaying each of the electric energies and the fuel consumption in a table.
4. A electric power generator set as set forth in claim 1, further comprising:
 - means for externally transmitting the calculated result.
5. A system comprising a plurality of the electric power generator sets as set forth in claim 1 connected in parallel, wherein each electric power generator set comprises:
 - means for cooperatively controlling the generator and inverter of the electric power generator set itself; and

means for detecting electric current from the external electric power supply.

6. A system comprising the electric power generator sets as set forth in claim 5, wherein a control system of each electric power generator set comprises:

means for communicating with the control system of the other electric power generator set; and

means for centralized control over the other control system so as to make the control system serve as a master unit .

7. A system using the electric power generator sets as set forth in claim 6, wherein the control system serving as a master unit comprises:

means for accumulating information of generated electric power required of the other electric power generator set, the information being transmitted from the control system of the other electric power generator, calculating load electric power of the system, and determining the number of the electric power generator set to be operated.

8. A system using the electric power generator sets as set forth in claim 7, wherein the control system serving as the master unit comprises:

means for controlling the counted electric power generators to be operated so as to equalize their outputs.

9. A system using the electric power generator sets as set forth in claim 7, wherein the control system serving as the master unit comprises:

means for controlling a specific one of the counted electric power generators to be operated so as to maximizing output of the specific one.

10. A system using the electric power generator sets as set forth in claim 7, wherein the control system serving as the master unit comprises:

means for recognizing operation/rest state of its own electric power generator set or the

other electric power generator set and choosing the control system serving as a next master unit.

11. A system using the electric power generator sets as set forth in claim 7, wherein the control system serving as the master unit comprises:

means for shifting the electric power generator set to be operated at each predetermined period.

12. A system using the electric power generator sets as set forth in claim 7, wherein the control system serving as the master unit comprises:

means for preventing reverse electric power flow to the external electric power supply by cooperating with the other control system.

13. A system comprising the electric power generator sets as set forth in claim 1, further comprising:

waste heat recovery means for recovering waste heat from the engine so as to generate heat;

means for detecting information concerning heat energy consumed for generating hot water;

means for calculating heat energy, an amount of the heat energy and energy efficiency;

means for registering the calculated result; and

image-displaying means for displaying a table representing the respective electric energies of the external electric power supply, the electric power generator set and the load in the system, an amount of the heat energy and the energy efficiency.

14. A system using the electric power generator sets as set forth in claim 13, further comprising:

means for calculating fuel consumption for driving the engine; and

image-displaying means for displaying each electric energy, heat energy and the fuel

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consumption in a table.

15. A system using the electric power generator sets as set forth in claim 13, further comprising:

means for transmitting the calculated result outside.

16. A system using the electric power generator sets as set forth in claim 13, further comprising:

means for remote communication such as to enable the system to be operated remotely.

17. A system using the electric power generator sets as set forth in claim 13, further comprising:

means for detecting abnormality of the system based on the calculated result and informing concerning the abnormality.

18. A system using the electric power generator sets as set forth in claim 13, further comprising:

means for minimizing ecological load or electric power cost based on the calculated result.